

Attachment 1

MLDP Application System Responsibilities Matrix (SRA)

Physical Database Services for Database Environments RACI Chart					
#	Service Component	Service Element	Responsibility		
			Vendor	TPWD	ATOS/DCS
1	Software	Select appropriate RDBMS based on the application needs and TXDCS RDBMS Strategy and Roadmap	I, C	R, A	I, C
2	Software	Install, validate and test database software, upgrades, and patches/fixes	I, C	I, C	R, A
3	Software	Install third-party DBA tools on the database servers	I, C	I, C	R, A
4	Software	Provide software licenses and product support contracts (TPWD Service Provider will have infrastructure licenses which include the DBMS and vendor support licenses).	I, C	C, I	R, A
5	Logical Design	Database Architecture and Strategy	R, A	I, C	I, C
6	Logical Design	Design and create a logical data model	R, A	I, C	I, C
7	Logical Design	Translate logical data models into physical database model	R, A	I, C	I, C
8	Physical Design	Review, validate and make recommendations about Physical Database Model provided by the vendor	I, C	R, A	I, C
9	Physical Design	Provide database space requirement (initial size, growth for the next year at the minimum)	R, A	I, C	I, C
10	Physical Design	Provide and maintain database Installation and Configuration Standards and Best Practices which typically include database version and patch level, basic configuration options such as db_block size and code page, basic startup parameters, and disk/file system layout, etc.	I, C	I, C	R, A
12	Physical Design	Provide database Configuration Special Requirements that are specific to the application that the database is supporting.	R, A	I, C	I, C
13	Physical Design	Provide database high availability requirement.	I, C	I, C	R, A
14	Physical Design	Provide database high availability solution and design.	I, C	I, C	R, A
15	Administration	Support various database environments (Dev, QA, UAT, Test, Production, DR) and maintain required availability. This typically includes proactive database maintenance and monitoring, backup, and work on INC, Service Requests, CRQ.	I, C	I, C	R, A
16	Administration	Documentation for Run book / Troubleshooting methodologies	I, C	I, C	R, A
17	Administration	Maintain, operate and upgrade, as necessary, monitoring tools to monitor database availability and performance.	I, C	I, C	R, A
18	Administration	Add new database file systems or increase size of existing file systems as required	I, C	I, C	R, A
19	Administration	Monitor database growth and performance	I, C	I, C	R, A
20	Administration	On a regular basis, monitor the status of the RDBMS and advise the agencies in writing regarding upgrades and releases thereto and the timing thereof.	R, A	I, C	I, C
21	Administration	Maintain application source code for application database or schema definition (either DDL and DML scripts or Data Dictionary or both) for each database environment.	R, A	I, C	I, C
22	Administration	Provide scripts and requirement for application specific Database jobs that have to be run on the database server.	R, A	I, C	I, C
23	Administration	Setup application-specific databases jobs using scripts/requirement provided by the vendor.	I, C	I, C	R, A
24	Administration	Development and scheduling of non-application specific Database maintenance jobs including statistics collection, DB Consistency Check, DB logs recycling, old trace files clean-up, etc.	I, C	I, C	R, A

25	Administration	Design and implement database high availability solutions, such as MSSQL Replication, Database Mirroring, DataGuard, Golden Gate, etc.	I, C	I, C	R, A
26	Backup & Recovery	Provide database Backup & Recovery Requirement Document (schedule, level of backup, retention, etc.)	I, C	R, A	I, C
27	Backup & Recovery	Provide Backup & Recovery Services as required by the Backup & Recovery Requirement Document	I, C	I, C	R, A
28	Backup & Recovery	Disaster Recovery (DR) - Requirement	I, C	R, A	I, C
29	Backup & Recovery	Disaster Recovery (DR) - Design	I, C	I, C	R, A
30	Backup & Recovery	Disaster Recovery (DR) - Execution	I, C	I, C	R, A
31	Backup & Recovery	Verify database backup & restore capability regularly per the contract requirement	I, C	I, C	R, A
32	Backup & Recovery	Database Restore - Initiation	I, C	R, A	I, C
33	Backup & Recovery	Database Restore - Execution	I, C	I, C	R, A
34	Backup & Recovery	Database Restore - Validation	I, C	R, A	I, C
35	Backup & Recovery	Database Failover Initiation	I, C	R, A	I, C
36	Backup & Recovery	Database Failover – Execution	I, C	I, C	R, A
37	Performance Testing	Before go-live, perform database/application performance test to make sure that the application performance meets the requirement and that a performance baseline can be established	R, A	I, C	I, C
38	Performance Testing	Assist vendor in performing testing	I, C	R, A	I, C
39	Performance Monitoring	Perform database performance monitoring; Provide recommendations to the vendor with respect to optimizing Application performance and throughput.	I, C	I, C	R, A
40	Performance Monitoring	Provide application specific technical collaborative assistance with regard to identifying and resolving database stability, connectivity, performance, and space issues.	R, A	I, C	I, C
41	Performance Monitoring	Perform general technical trouble shooting and give consultation to development teams	I, C	I, C	R, A
42	Performance Monitoring	Monitor and identify database performance issues that degrade, or threaten to degrade, overall systems performance.	I, C	I, C	R, A
43	Performance Monitoring	Maintain an up-to-date repository of key measurements for performance and capacity trend analysis. These may include buffer hit ratio, memory/CPU usage, I/O stats, space usage, locks, etc.	I, C	I, C	R, A
44	Security	Provide and maintain Database Security Standards that are in line with industry standard and audit requirements. These documents should be published on the TPWD DCS Portal.	I, C	I, C	R, A
45	Security	Ensure least-privilege principle is implemented in all database environments. Typically, only TPWD Service Provider DBAs should have DBA role (for example, SYSDBA and DBA in Oracle, SA in MSSQL, SYSADM in DB2, etc.). In case such DBA privilege are needed by the customer (for initial application installation or troubleshooting issue, e.g.), it could be temporarily granted to the customer with a written request.	I, C	I, C	R, A
46	Security	Provide special security requirement (such as encryption)	I, C	R, A	I, C
47	Security	Implement special security measures as required by TPWD	I, C	I, C	R, A
49	Capacity Planning	Monitor database resource usage (primarily space, CPU, memory)	I, C	I, C	R, A

50	Capacity Planning	Analyze resource usage trend data, and regularly advise the customers of capacity issues, and provide recommendations on actions to address the capacity issues.	I, C	I, C	R, A
51	Capacity Planning	Regularly provide application Capacity growth projection based on logical upcoming application needs to TPWD Service Provider to estimate physical resource needs	R, A	I, C	C, I
52	Capacity Planning	Review capacity requirements/forecast provided by the customers and start the change process to increase the capacity.	I, C	I, C	R, A
53	Capacity Planning	Approve and coordinate change requests to increase database/server capacity.	I, C	R, A	I, C
54	Implementation	Install/Create database in any environment following the Physical Database Design and industry best practices	I, C	I, C	R, A
55	Implementation	Perform shutdowns and startups of database instance per change process.	I, C	I, C	R, A
56	Implementation	Implement DML and DDL in non-production environment	I, C	R, A	I, C
57	Implementation	Perform database export/import tasks of the application schema in non-production environment	I, C	R, A	I, C
58	Implementation	Implement DML in Prod/DR environment	I, C	R, A	I, C
59	Implementation	Implement DDL in Prod/DR environment	I, C	R, A	I, C
60	Implementation	Perform database export/import tasks of the application schema in Prod environment	I, C	I, C	R, A
61	Implementation	Perform reorganizations and index rebuilds coordinated with TPWD Customer schedules and approvals. Reorganizations include reclamation of space as well as rearranging the location of data files, log files, archive logs according to TPWD Customer requirements	I, C	I, C	R, A
62	Implementation	Develop data archival/purge plan and scripts in Dev/QA	I, C	R, A	I, C
63	Implementation	Execute data archival/purge in test and prod	I, C	R, A	I, C
64	Implementation	Refresh database schemas from production to non-production databases	I, C	R, A	I, C
65	Implementation	Migrate database schemas from non-production to Production	I, C	I, C	R, A
66	Implementation	Perform data fixes - research, execution, validation	R, A	I, C	I, C
	RACI Definition				
	RACI tables show who is Responsible, Accountable, Consulted and Informed for each procedural step. The definition of the letters used within the RACI tables is as follows:				
	R	Responsible - Correct execution of process and activities, or the person or people responsible for getting the job done			
	A	Accountable - Ownership of quality and end result of process; exactly one person must be accountable for each activity			
	C	Consulted - Involvement through input of knowledge and information			
	I	Informed - Receiving information about process execution and quality			

Middleware Application Server Administration RACI Chart					
#	Service Component	Service Element	Responsibility		
			Vendor	TPWD	ATOS/DCS
1	Software Installation and Upgrades	Provide middleware application server source files and assistance during software installations, patches and upgrades for middleware application server products.	R, A	I, C	I, C
2	Software Installation and Upgrades	Provide pre-requisites to architects and developers to support their planning efforts.	R, A	I, C	I, C
3	Software Currency and Release Levels	Maintain software currency.	R, A	I, C	I, C
4	Software Evaluation and Testing	Evaluate, test, and coordinate the installation of fixes and upgrades.	R, A	I, C	I, C
5	Software Evaluation and Testing	Verify product configurations satisfy the business requirements and are performing as expected.	R, A	I, C	I, C
6	Effective Use of Software	Proactively assess technology and process improvements to improve the software support and related services and provide technical support, advice and interfacing as necessary for application development staff as it relates to the use of the Software.	R, A	I, C	I, C
8	Software Changes	Create and manage Change Tickets for self-generated and TPWD requested changes (such as patches and upgrades, etc.).	R, A	I, C	I, C
9	Software Changes	Perform MLDP application updates due to middleware changes.	R, A	I, C	I, C
10	Software Changes	Implement change tickets for configuration updates required by the MLDP business application.	I, C	I, C	R, A
11	Software Support	Administer and maintain configuration of middleware application server products. Examples of middleware application server configuration include creating/ maintaining application resources, deploying applications in Test/Production environments	I, C	I, C	R, A
12	Software Support	Administer and maintain configuration of middleware application server products. Examples of middleware application server configuration include creating/ maintaining application resources, deploying applications in Development/QA environments;	R, A	I, C	I, C
13	Software Support	Maintain detailed documentation of the middleware application server environments.	R, A	I, C	I, C
14	Software Support	Provide technical advice to architects and developers during project design.	I, C	R, A	I, C
15	Software Support	Provide assistance with troubleshooting application failures related to middleware application server product configurations. (Example: Unable to access a data source managed by the middleware application server product.)	R, A	I, C	I, C
16	Software Support	Analyze performance of the middleware application server product environments and fine-tune as needed.	R, A	I, C	I, C
17	Software Support	Troubleshooting middleware application server product performance anomalies.	I, C	I, C	R, A
18	Software Support	Troubleshooting application performance anomalies.	R, A	I, C	I, C
19	Software Support	Coordinate performance trouble-shooting efforts, non-Major Incident Management, except where ATOS and	R, A	I, C	I, C

		TPWD agree that the issue lies with the application.			
20	Software Support	Coordinate performance trouble-shooting efforts, Major Incident Management, except where ATOS and TPWD agree the issue lies with the application.	R, A	I, C	I, C
21	Software Support	Coordinate performance trouble-shooting efforts where ATOS and TPWD agree the issue lies with the application—including testing and consultation.	R, A	I, C	I, C
22	Software Support	Resolve break/fix problems as reported in Incident Management.	R, A	I, C	I, C
23	Software Support	Document root cause and remedial actions in Incident Management or Problem Management as appropriate.	R, A	I, C	I, C
24	Software Support	Provide read-only access to application logs as requested by application administrator(s).	I, C	R, A	I, C
25	Software Support	Provide support for middleware application server products in production, test, and development, including 7x24 on-call support.	I, C	I, C	R, A
26	Software Support	Monitor the health of applications that use middleware application server products.	R, A	I, C	n/a
27	Software Support	Request additional Optional monitoring of applications that use middleware application server products.	R, A	I, C	I, C
28	Software Security	Ensure product environments are compliant with agreed to security standards.	R, A	I, C	I, C
29	Software Security	Recommend and help implement changes in current definitions and procedures to comply with defined security requirements.	R, A	I, C	I, C
	RACI Definition				
	RACI tables show who is Responsible, Accountable, Consulted and Informed for each procedural step. The definition of the letters used within the RACI tables is as follows:				
	R	Responsible - Correct execution of process and activities, or the person or people responsible for getting the job done			
	A	Accountable - Ownership of quality and end result of process; exactly one person must be accountable for each activity			
	C	Consulted - Involvement through input of knowledge and information			
	I	Informed - Receiving information about process execution and quality			

Server Administration RACI Chart					
#	Service Component	Service Element	Responsibility		
			Vendor	TPWD	ATOS/DCS
1	System Administration - Application Management	Perform TPWD Customer business application shutdowns and restarts as required/ requested following the Service Management Manual (SMM).	I, C	C	R, A
2	System Administration - Application Management	Change/ adjust application configuration as required.	I, C	R, A	C
3	System Administration - Application Management	Provide on call support for MLDP Application changes/ problems/ maintenance resulting from server support activities.	I, C	R, A	C
4	System Administration - Application Management	Provide MLDP Application startup scripts, shutdown scripts, cronjob/ services.	I, C	R, A	C
5	System Administration - Application Management	Test and certify all TPWD Customer business application changes prior to deployment in production.	I, C	R, A	C
6	System Administration - Application Management	Provide first/ second level TPWD Customer business application support for problem determination/ management.	I, C	R, A	C
7	System Administration - Application Management	Identify opportunities for TPWD Customer to reduce Equipment and Software costs (from the perspective of TPWD Customer) and/ or improve System performance.	I, C	C	R, A
8	System Administration - Capacity Planning	Monitor TPWD Customer processor/ memory/ file system utilization and requirements.	I, C	C, I	R, A
9	System Administration - Capacity Planning	Provide advice and recommendations to TPWD Customer upon reasonable request (for example, product research, project support, application tuning, and efficiency improvement requests).	I, C	C	R, A
10	System Administration - Capacity Planning	Analyze TPWD Customer Application requirements and quantifying their impact on the capacity of the Server environments as requested.	I, C	C	R, A
11	System Administration - Configuration Planning	Develop the technical deployment planning for Central Processing Unit (CPU), storage (including disk, tape, or other storage), and related peripherals.	I, C	C, I	R, A
12	System Administration - Documentation	Maintain and update the Server documentation for all server administrative procedures, services and system configuration.	I, C	C	R, A
13	System Administration - Facilities Management	For equipment residing on TPWD Customer raised floor or facilities, provide required floor space, power, for non-datacenter network access as required for servers.	I, C	R, A	n/a
14	System Administration - Facilities Management	For equipment residing on TPWD Customer raised floor or facilities, provide required physical access controls and access to system administrators.	I, C	R, A	I
15	System Administration - Facilities Management	For equipment residing on Service Provider raised floor or facilities, provide required floor space, power, and network for servers.	I, C	C, I	R, A
16	System Administration - Facilities Management	For equipment residing on Service Provider raised floor or facilities, provide required physical access controls and access to system administrators.	I, C	n/a	R, A

17	System Administration - File Management	Modify file system sizes.	I, C	C	R, A
18	System Administration - File Management	Verify mount point availability.	I, C	C	R, A
19	System Administration - File Management	Repair defective file systems.	I, C	C	R, A
20	System Administration - File Management	Modify file system permissions.	I, C	C	R, A
21	System Administration - File Management	Manage server file migration to new disk or new disk configuration.	I, C	C	R, A
22	System Administration – Hardware Installation	Validate power availability in TPWD Customer data center.	I, C	R, A	C
23	System Administration – Hardware Installation	Install or coordinate replacement/ upgrade parts for servers and peripherals.	I, C	C	R, A
24	System Administration - Hardware Installation (DCS Customer owned facility)	Validate hardware connections (for example, outlets and network).	I, C	R, A	C
25	System Administration - Hardware Installation (DCS Service Provider-owned facility)	Validate hardware connections (for example, outlet voltages, internal computer connections, network)	I, C	C	R, A
26	System Administration - Hardware Management	Define server/ component (hardware) upgrades.	I, C	C	R, A
27	System Administration - Hardware Management	Perform/ coordinate approved and funded server/ component hardware upgrades following agreed to change management process.	I, C	C	R, A
28	System Administration - Hardware Management	Monitor and update server/ component microcode as required.	I, C	I	R, A
29	System Administration - Hardware Management	Plan the lifecycle deployment and retirement of servers/ peripherals.	I, C	R, A	C
30	System Administration - Hardware Management	Schedule preventive maintenance on all equipment based on reviews, analysis of equipment performance records, and original equipment manufacturer recommendations.	I, C	C	R, A
31	System Administration - ID Administration	Review/ approve requests for privileged user authorities.	I, C	R	R, A
32	System Administration - ID Administration	Remove authority for IDs for which management authorization no longer exists.	I, C	I	R, A
33	System Administration - ID Administration	Provide ownership for TPWD Customer business application IDs and the acceptance of variations to the MSSP 1 which may be required in support of said TPWD Customer business application.	I, C	R, A	C
34	System Administration - ID Administration	Identify/ request specific root level privileges required for application support (NO direct root).	I, C	R, A	C
35	System Administration - Monitoring	Provide server file system/ storage monitoring.	I, C	I	R, A
36	System Administration - Monitoring	Provide server hardware error monitoring and problem resolution for server and component hardware.	I, C	I	R, A
37	System Administration - Operating System Management	Install/ configure server operating system software.	I, C	I	R, A

38	System Administration - Operating System Management	Identify requirements for operating system upgrades and collaborate with DCS Customer for installation of identified changes/ maintenance.	I, C	C	R, A
39	System Administration - Operating System Management	Provide operating system backup and recovery.	I, C	I	R, A
40	System Administration - Operating System Management	Perform server shutdowns and restarts as required/ requested following agreed to change management process.	I, C	C	R, A
41	System Administration - Operating System Management	Change/ adjust operating system configuration as required.	I, C	C	R, A
42	System Administration - Operating System Management	Create/ remove/ configure server storage.	I, C	C	R, A
43	System Administration - Operating System Management	Erase the data and configuration information resident in equipment or other systems, storage components and/ or devices utilizing tools or processes which meet guidelines specified by TPWD Customer prior to disposing of such equipment or other systems, storage components and/ or devices.	I, C	C	R, A
44	System Administration - Operating System Management	Perform all server changes in accordance with change/ problem management procedures.	I, C	C	R, A
45	System Administration - Operating System Management	Provide technical advice and support to authorized users as required.	I, C	C	R, A
46	System Administration - Operating System Management	Provide appropriate response and support of problems through resolution.	I, C	C	R, A
47	System Administration - Operating System Management	Manage, prioritize and coordinate all preventive and remedial maintenance and updates for operating system software.	I, C	C	R, A
48	System Administration - Operating System Management	Provide technical advice to the application support groups and assist in performing stress testing on system software.	I, C	C	R, A
49	System Administration - Operating System Management	Operating System network configuration.	I, C	C	R, A
50	System Administration - Operating System Management	Provide on call support for server changes/ problems/ maintenance.	I, C	C	R, A
51	System Administration - Operating System Management	Recommend and develop standards for configurations, operations, and metrics collection and reporting.	I, C	C	R, A
52	System Administration - Operating System Management	Automate manual operating system management processes where possible.	I, C	n/a	R, A
53	System Administration - Operating System Management	Provide Level 2 Support and Level 3 support to authorized users as necessary.	I, C	n/a	R, A
54	System Administration - Operating System Management	Provide system administration and operational support for high availability clusters requiring manual fail-over methods.	I, C	C	R, A

55	System Administration - Performance Analysis	Provide server performance analysis as required/ requested.	I, C	C	R, A
56	System Administration - Performance Analysis	Provide MLDP Application performance analysis as required/ requested.	I, C	R, A	C
57	System Administration - Performance Analysis	Analyze performance metrics and respond proactively to potential problem areas.	I, C	C	R, A
58	System Administration - Performance Analysis	Provide feedback to TPWD Customer regarding the impact of potential Architecture and design changes.	I, C	C	R, A
59	System Administration - Performance Analysis	Provide product research, project support, and advice on Equipment tuning and efficiency improvements.	I, C	I	R, A
60	System Administration - Performance Analysis	Provide product research, project support, and advice on the MLDP Application tuning and efficiency improvements.	R, A	I, C	C
61	System Administration - Problem Determination and Resolution	Provide assistance in analyzing and correcting all end-user computing and/ or Network problems that may be associated with Server processing.	I, C	C	R, A
62	System Administration - Security	Provide and maintain antivirus software for managed servers (where such software exists for the operating system).	I, C	I,C	R, A
63	System Administration - Security	Respond to server virus attacks and initiate corrective action to eliminate detected viruses on managed servers.	I, C	C	R, A
64	System Administration - Security	Respond to workstation virus attacks which impact servers and initiate corrective action to eliminate detected viruses on clients.	I, C	R, A	C
65	System Administration - Security	Provide invalid logon reports upon request.	I, C	I	R, A
66	System Administration - Security	Perform system security health checks.	I, C	I	R, A
67	System Administration - Security	Perform system security corrective action.	I, C	I	R, A
68	System Administration - Security	Promptly respond to security exposures.	I, C	I,C	R, A
69	System Administration - Security	Provide business need justification and exception request for IDs which do not/ cannot comply with MSSP for TPWD Customer IDs	I, C	R, A	C
70	System Administration - Security	Provide business need justification and exception request for IDs which do not/ cannot comply with MSSP for TPWD Service Provider IDs	I, C	C	R, A
71	System Administration - Software Installation	Install the MLDP Application software with instructions and code.	I, C	C	R, A
72	System Administration - Software Installation	Define/ coordinate/ install required application upgrades/ patches following agreed to change management process.	I, C	C	R, A
73	System Administration - Software Installation	Review all software conversion plans with TPWD Customer.	I, C	C	R, A
74	Backup and Recovery	Establish, document and maintain storage backup and recovery standards, policies and procedures.	I, C	C	R, A
75	Backup and Recovery	Schedule backups via backup server and client.	I, C	I	R, A
76	Backup and Recovery	Provide 24x7 support for backup application down (Priority 1).	I, C	n/a	R, A
77	Backup and Recovery	Monitor and report on status (miss/ fail) of backup application scheduled backups within the service levels.	I, C	I	R, A

78	Backup and Recovery	Restart failed file system backups and applications according to approved procedures as well as perform problem determination for backup client level misses/ failures.	I, C	I	R, A
79	Backup and Recovery	Monitor operational status (health check) of the backup application on the backup server.	I, C	I	R, A
80	Backup and Recovery	Perform backup data audit.	I, C	n/a	R, A
81	Backup and Recovery	Retain backups in accordance with the Service Management Manual (SMM).	I, C	C	R, A
82	Backup and Recovery	Perform general administration activities in support of backup server application (such as problem and/ change management, account meetings, communications, documenta-tion maintenance, etc.).	I, C	n/a	R, A
83	Backup and Recovery	Create and maintain backup application configuration files on the server and client.	I, C	n/a	R, A
84	Backup and Recovery	Provide recovery services for restoring OS and data.	I, C	C	R, A
85	Backup and Recovery	Tune backup server and client environment to provide optimum performance and reliability.	I, C	n/a	R, A
86	Backup and Recovery	Provide required authority (such as sudo) to perform required backup application functions on both the backup server and the backup client (such as modify dsmsvr file).	I, C	C	R, A
87	Backup and Recovery	Provide all required tape (media and cleaning) and inventories as required.	I, C	n/a	R, A
88	Backup and Recovery	Participate in Disaster Recovery planning and testing.	I, C	C	R, A
89	Backup and Recovery	Comply with appropriate security policies with regards to the backup application tool and Operating System (OS) level access.	I, C	n/a	R, A
90	Backup and Recovery	Monitor backup application log files. Monitor activity via OS log on the backup client for any unauthorized actions as required by security guidelines.	I, C	n/a	R, A
91	Backup and Recovery - Capacity Management	Monitor track and report tape and disk usage (such as storage pool).	I, C	n/a	R, A
92	Backup and Recovery - Capacity Management	Provide capacity reports as required.	I, C	n/a	R, A
93	Backup and Recovery - Capacity Management	Recommend changes required to meet future known backup and recovery requirements.	I, C	C	R, A
94	Backup and Recovery – Performance Management	Analyze any performance issues with backup server application, determine root cause and resolve.	I, C	n/a	R, A
95	Backup and Recovery – Performance Management	Schedule maintenance of backup/ recovery server and library hardware during established/ approved maintenance window.	I, C	C	R, A
96	Backup and Recovery - Hardware Management	Purchase and asset management of backup/ recovery hardware	I, C	n/a	R, A
97	Backup and Recovery - Hardware Management	Plan/ Coordinate install/ uninstall of backup/ recovery server and library hardware.	I, C	C	R, A
98	Backup and Recovery - Hardware Management	Initialization of backup/ recovery tape media volumes into backup application environment.	I, C	n/a	R, A
99	Backup and Recovery - Hardware Management	Configure and test backup/ recovery disk and tape.	I, C	n/a	R, A
100	Backup and Recovery - Hardware Management	Reboot Servers - backup server and Recycle Tape Library.	I, C	I	R, A

101	Backup and Recovery - Server Software Management	Plan (recommend) and install for new releases of backup/ recovery software - Backup Server/ Client.	I, C	C	R, A
102	Backup and Recovery - Server Software Management	Configure, customize and test backup/ recovery software – Backup Server.	I, C	n/a	R, A
103	Backup and Recovery - Server Software Management	Resolve problems with backup/ recovery software – Backup Server/ Client	I, C	C	R, A
104	Backup and Recovery - Client Software Management	Configure, customize and test backup/ recovery software – Backup Client	I, C	n/a	R, A
105	Backup and Recovery - Backup Application Agent Software Management	Plan for new releases of application backup agents.	I, C	C	R, A
106	Backup and Recovery - Backup Application Agent Software Management	Install and configure where needed application backup agent software	I, C	C	R, A
107	Backup and Recovery - Backup Application Agent Software Management	Creation, execution and maintenance of any scripts (or components of scripts), which alter the state of a database and/ or application as part of an online backup using a recovery management tool and/ or shell script automation (such as pre/ post backup scripts that take database and/ or application down and bring it back up, Oracle/ RMAN).	I, C	C	R, A
108	Backup and Recovery - Backup Application Agent Software Management	Configure, customize and test application specific backup components (such as Oracle/ RMAN).	I, C	C	R, A
109	Backup and Recovery - Backup Application Agent Software Management	Test and resolve any backup/ recovery problems with backup application agents.	I, C	C	R, A
110	Backup and Recovery - Email and Collaboration Services	Maintenance of standard backup scripts supplied with Tivoli Data Protector (TDP) for Mail agent where standard scripts are used (no transactional logging, no database commands required, etc.).	I, C	n/a	R, A
111	Backup and Recovery - Email and Collaboration Services	Creation, modification and scheduling of the scripts for each account running transactional logging or requiring commands outside of the basic TSM backup commands in the TDP supplied standard scripts based on technical and contractual requirements.	I, C	C	R, A
112	Backup and Recovery - Email and Collaboration Services	Implementation of scripts on the servers for each account running transactional logging based on crontab/ Intel scheduling and ensuring cron/ Intel scheduling is running as configured.	I, C	n/a	R, A
113	Backup and Recovery - Email and Collaboration Services	Monitor transaction log file space.	I, C	n/a	R, A
114	Backup and Recovery - Offsite Storage	Transportation of external backup media to and from off-site storage locations.	I, C	n/a	R, A

115	Backup and Recovery - Offsite Storage	Maintain the rotation of backup storage media at off-site storage location per the Customer retention schedule in the SMM.	I, C	C	R, A
116	Disk Storage – Configuration Healthcheck	Monitor Status of Logical Disk Layout, RAID Layout and Logical Unit Number (LUN) copy layout.	I, C	n/a	R, A
117	Disk Storage - Configuration Problems	Resolve operational errors, when reported via a problem ticket, for the logical storage definitions created on the disk server.	I, C	n/a	R, A
118	Disk Storage - Configuration Problems	Resolve problems with Logical Disk Layout, RAID Layout and Logical Unit Number (LUN) Copy Layout.	I, C	n/a	R, A
119	Disk Storage - Configuration Changes	Implement incremental changes, when requested via a change ticket, for the logical storage definitions created on the disk server (such as storage provisioning).	I, C	n/a	R, A
120	Disk Storage - Configuration Changes	Implement Changes to Logical Disk Layout, RAID Layout, and Logical LUN Copy Layout.	I, C	n/a	R, A
121	Disk Storage – Configuration Environment	Capacity Planning for the Storage Unit.	I, C	C	R, A
122	Disk Storage – Configuration Environment	Develop and implement Logical Storage Layout strategy in the Storage Unit.	I, C	C	R, A
123	SAN Storage – Capacity Management	Perform Capacity planning for the switches and ports.	I, C	C	R, A
124	SAN Storage – Performance Management	Problem determination and resolution for reported performance issues.	I, C	n/a	R, A
125	SAN Storage – Performance Management	Monitor for switch failures.	I, C	n/a	R, A
126	SAN Storage – Hardware Management	Configuration planning for SAN switch.	I, C	C	R, A
127	SAN Storage - Technology Planning	Evaluate new SAN switch and prepare risk/ benefits analysis to support evaluation decisions	I, C	C	R, A
128	SAN Storage - Technology Planning	Provide advice/ consultation to aid in the solution/ exploitation of new SAN switch.	I, C	C	R, A
129	SAN Storage - Technology Planning	Design solutions/ recommendations to Customer.	I, C	C	R, A
130	SAN Storage - Technology Planning	Design of SAN solutions.	I, C	C	R, A
	RACI Definition				
	RACI tables show who is Responsible, Accountable, Consulted and Informed for each procedural step. The definition of the letters used within the RACI tables is as follows:				
	R	Responsible - Correct execution of process and activities, or the person or people responsible for getting the job done			

	A	Accountable - Ownership of quality and end result of process; exactly one person must be accountable for each activity			
	C	Consulted - Involvement through input of knowledge and information			
	I	Informed - Receiving information about process execution and quality			

GIS Application Utility Services RACI Chart					
#	Service Component	Service Element	Responsibility		
			Vendor	TPWD	ATOS/DCS
	GIS Database Administration				
	Database Administration	For anything related to database management and support, including administration, security, backup and restore, etc., please refer to the Physical Database Support SRM document, GL-200-14 RACI Physical DBA.docx.			
	GIS Application Server Administration				
1	GIS server planning	Define GIS application vision and strategy	n/a	C	R, A
2	GIS server planning	Assess, plan, and design GIS application server environment and implementation strategy (for example, hardware and infrastructure) required to support GIS application vision and strategy.	n/a	R, A	C
3	Installation and Upgrades	Plan GIS software product upgrades, fix packs, and security patches	n/a	R, A	C
4	Installation and Upgrades	Approve GIS software product upgrades, fix packs, and security patches.	n/a	C	R, A
5	Installation and Upgrades	Contribute in decisions of configuration parameters during the installation or upgrade of GIS software product in development/test environment by participating in the installation process (participation in the installation is a TPWD Customer option for the purpose of providing product exposure to the TPWD Customer).	n/a	C	R, A
6	Installation and Upgrades	Install, and maintain GIS software product; apply upgrades, fix packs, and security patches in all environments (Examples: ArcIMS, ArcGIS Server, ArcInfo IAC Server, etc.).	n/a	R, A	C
7	Installation and Upgrades	Configure GIS software product in development and test environments.	n/a	C	R, A
8	Installation and Upgrades	Implement GIS software product configurations in pre-production and production environments.	n/a	R, A	C
9	Support	Investigate and troubleshoot GIS issues and performance anomalies to determine whether the issue or anomaly is software product or business logic related.	n/a	R	R, A
10	Support	Trouble shooting GIS software product issues or performance anomalies.	n/a	R, A	C
11	Support	Trouble shooting GIS business logic issues or performance anomalies.	n/a	C	R, A
12	Security	Plan and design application security strategy and requirements (user IDs, access control protocol, etc.).	n/a	C	R, A
13	Security	Implement systems and environments which are compliant with security standards and requirements.	n/a	R, A	C
	GIS Storage Management				
14	Technology Planning	Define storage requirements	n/a	C	R, A
15	Technology Planning	Evaluate new storage devices and design storage and SAN solutions.	n/a	R, A	C
16	Technology Planning	Approve final design for storage layout and implementation.	n/a	C	R, A
17	Technology Planning	Capacity Planning for the Storage.	n/a	R, A	C

18	Environment Configuration	Implement storage layout strategy in the storage unit.	n/a	R, A	C
19	Storage Maintenance	Install, maintain and monitor the backup storage media at off-site storage location per the TPWD Customer retention schedule in the Policies and Procedures Manual.	n/a	R, A	C
20	Backup and Recovery	Establish, document and maintain storage backup and recovery standards, policies and procedures.	n/a	R, A	C
21	Media Management	Manage external backup and storage media.	n/a	R, A	C
	RACI Definition				
	RACI tables show who is Responsible, Accountable, Consulted, and Informed for each procedural step. The definition of the letters used within the RACI tables is as follows:				
	R	Responsible - Correct execution of process and activities, or the person or people responsible for getting the job done			
	A	Accountable - Ownership of quality and end result of process; exactly one person must be accountable for each activity			
	C	Consulted - Involvement through input of knowledge and information			
	I	Informed - Receiving information about process execution and quality			
	Terms and Acronyms Definition				
	GIS Database Software	Includes underlying database software such as SQLserver, Oracle, DB2, and the GIS software used (such as the ESRI Spatial Database Engine (SDE)). These must be configured together.			
	GIS Development	DCS Customer configurations of development environment differ depending on hardware and software configurations, database types, and dataset sizes. Full rights to development environment are retained by DCS Customer staff.			
	GIS Test	DCS Customer configurations and existence of test environments differ depending on hardware and software configurations, database type, and dataset sizes.			
	GIS Pre-Production	This environment is assumed to be in place for final test or staging prior to move to production, if applicable, on a Customer-by-Customer basis. Permissions and performance of tasks are the same as production.			

Application Services RACI Chart					
#	Service Component	Service Element	Responsibility		
			Vendor	TPWD	ATOS\DCS
1	Functional Requirements	Confirm User Subject Matter Experts for Requirements Definition	R,A	C	NA
2		Develop Solution Context Diagram	R,A	C	NA
3		Develop Process Model	R,A	C	NA
4		Develop High-Level Data Model	R,A	C	C
5		Develop Use Cases	R,A	C	NA
6	Analyze Non-Functional Requirements	Identify Solution Technology Platform Requirements	R	C	A,C
7		Define Reliability, Availability, Service Level Needs	R	C	A,C
8		Define Performance Needs	R	C	A,C
9		Identify Security, Legal, Regulatory and Compliance Needs	R	C	A,C
11	Conduct Existing Solution Inventory and Gap Analysis	Map Existing Solutions to Requirements	R,A	C	NA
12		Identify Solution Functional Gaps	R,A	C	NA
13		Develop Strategies to Address Solution Gaps	R,A	C	NA
14		Define Solution Gap Requirements	R,A	C	NA
15	Specify Requirements	Compile Requirements	R,A	C	NA
16		Assess and Rank Requirements	R,A	C	NA
17		Group and Phase Requirements for Implementation	R,A	C	NA
18		Publish Requirements Specification	R,A	C	NA
19	Obtain Sign Off on Requirements	Conduct Requirements Review with Sponsors	R,A	C	NA
20		Address Requirements Review Issues	R,A	C	NA
21		Obtain Sponsor Approval of Requirements	R,A	C	NA
22		Address Requirements Review Issues	R,A	C	NA
23		Obtain Sponsor Approval of Requirements	R,A	C	NA
24	Help Desk	Level 1 Helpdesk	NA	R, A	NA
25		Level 2 Helpdesk	R, A	I, C	NA
26		Level 3 Helpdesk	R, A	I, C	I
RACI Definition					
	RACI tables show who is Responsible, Accountable, Consulted and Informed for each procedural step. The definition of the letters used within the RACI tables is as follows:				
	R	Responsible - Correct execution of process and activities, or the person or people responsible for getting the job done			
	A	Accountable - Ownership of quality and end result of process; exactly one person must be accountable for each activity			
	C	Consulted - Involvement through input of knowledge and information			
	I	Informed - Receiving information about process execution and quality			